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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JONES JR., ROBERT STOCKTON

ART UNIT

PAPER NUMBER

4151

MAIL DATE

DELIVERY MODE

04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,791	Applicant(s) MANSO ET AL.	
	Examiner ROBERT JONES	Art Unit 4151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/20/2006, 07/20/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the term "approximately " in is a relative term which renders the claim indefinite. The term " approximately " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Inclusion of the phrase "approximately homogeneous" makes it difficult to ascertain the amount or degree to which the claimed invention is homogeneous. Because Claims 2-11 rely upon Claim 1, they are also rendered indefinite by the term "approximately", and are similarly rejected.

Further regarding Claims 1-11, the term "sheet-like" in is a relative term which renders the claim indefinite. The term "sheet-like " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the

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invention. Inclusion of this term in Claims 1-11 makes it unclear whether or to what extent the invention must be in sheet form.

Further regarding Claim 11, the claim includes the limitation "functional covering". However, "functional" is not defined in the specification. Applicant discloses (p. 1, line 11) that sheet-like covering materials are mainly used in interiors as wallcovering, floor-covering, and "functional coverings". No further definition of "functional coverings" is provided. Applicant further discloses (p. 6, lines 3-6) that the inventive sheet-like covering material is preferably used as "functional covering", in particular floorcovering. Applicant further states that it can also be used successfully in sports facilities; however, it is unclear how the inventive material would be applied in such a facility. Again, "functional covering" is not defined, and no further examples are provided. As a result, it is unclear what subject matter applicant is claiming.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lausberg et al. (US Pat. No. 5,237,000).

Regarding Claims 1, 6, 7, and 9, Lausberg teaches an impact modified polyurethane-polyester molding material containing:

A) from 30 to 90 parts by weight of at least one thermoplastic polyurethane elastomer,

B) from 5 to 65 parts by weight of at least one thermoplastic polyester, preferably a polyalkylene terephthalate, and

C) from 5 to 30 parts by weight of at least one graft rubber, and

D) from 0 to 60% by weight of at least one fibrous or particulate filler and

E) from 0 to 10% by weight of at least one assistant (auxiliary)

prepared by homogenizing the formative components at 190-250°C (Abstract). Said molding materials are suitable for the extrusion of sheets, in particular thermoforming sheets (col. 13, lines 18-20). Lausberg does not disclose the use of said sheets as coverings; however, failure to disclose this use of said sheets does not preclude them from functioning as coverings. It is the Examiner's opinion that said sheets are fully capable of acting as coverings without further modification.

Regarding Claim 2, suitable fillers include, inter alia, calcium carbonate, amorphous silica, and kaolin (col. 11, lines 45-49).

Regarding Claim 5, said polyesters can be prepared by polycondensation of aromatic dicarboxylic acids (col. 7, lines 1-3) with aliphatic dihydroxy compounds (col. 7, lines 7-8). Terephthalic acid is a particularly preferred aromatic dicarboxylic acid (col. 7, lines 11-13). Preferred aliphatic dihydroxy compounds are alkanediols of from 2 to 6 carbon atoms and cycloalkanediols of from 5 to 7 carbon atoms (col. 7, lines 21-23), and mixtures of at least two of said diols (col. 7, lines 26-27).

Further regarding Claim 6, polyethylene terephthalate is described as being particularly suitable (col. 7, lines 28-30).

Regarding Claim 8, examples of assistants (auxiliaries) include UV stabilizers (col. 12, line 25) and lubricants (col. 12, line 31-32).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 2, 4, 7, 8, and 11 are rejected under 35 U.S.C. 103(a) as obvious over Allgeuer et al. (PCT Pub. No. WO 01/05574 A1; US Pat. No. 6,946,182 is herein referred to as the US equivalent).

Regarding Claims 1 and 11, Allgeuer teaches a film, sheet, or coating based on one or more thermoplastic polymeric materials (col. 4, lines 65-67). Suitable thermoplastic polymers are semicrystalline or amorphous polymers (col. 4, line 67-col. 5, line 1), and may be selected from, inter alia, thermoplastic polyurethanes (col. 5, line 5) and polyesters (col. 5, line 8). Absorbent materials can be incorporated into the polymer as a type of filler (col. 40, lines 15-17). Said film, sheet, or coating is useful to manufacture plastic based articles (col. 37, lines 4-6) such as floor covering (col. 37, lines 18-19).

Allgeuer does not teach that said film, sheet, or coating comprises polyurethane in an amount of at least 5% by weight. However, Allgeuer teaches a three-layer fringed film in which the layer ratios are 60% fringed layer/20% core/20% outside (col. 49, lines 60-61). The core layer is made from 85 weight percent LDPE (col. 50, lines 2-3), leading to LDPE being present in 17% by weight overall in the final three-layer film. LDPE is described as being a thermoplastic polymer suitable for the invention (col. 5, lines 16-19), along with thermoplastic polyurethanes (col. 5, line 5). Using the three-

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layer fringed film described above as a guide, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a thermoplastic polyurethane above in a weight percent equal to that of LDPE. These materials are both described by Allgeuer as being preferred polymeric materials, and are thus deemed to be interchangeable.

Regarding Claim 2, suitable fillers include calcium carbonate (col. 40, lines 19-21).

Regarding Claim 8, said film, sheet, or coating may further comprise additives (auxiliaries) (col. 27, lines 2-3) including UV stabilizers (col. 27, line 11) and anti-static agents (col. 27, lines 20-23).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lausberg as applied to claims 1, 2, and 5-9 above, and further in view of Scheirs (John Scheirs and Timothy E. Long, Modern Polyesters: Chemistry and Technology of Polyesters and Copolyesters, 2003).

Regarding Claim 4, Lausberg remains as applied above. Lausberg does not teach that the thermoplastic that is present in addition to the polyurethane elastomer is amorphous. Scheirs teaches that PETG is a clear, tough, amorphous polyester that possesses higher strength (p. 281, lines 1-3) and flexibility (p. 282, lines 6-7) compared to PET and other resins. Scheirs further teaches that the single largest application for PETG is the heavy gauge sheet market (p. 281, para. 2, Lines 3-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lausberg's molding material and sheets produced therefrom in view of Scheirs to include amorphous PETG resin for the benefit of improved strength and flexibility.

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lausberg as applied to claims 1, 2, and 5-9 above, and further in view of Pagani et al. (US Pat. No. 5,298,209).

Regarding Claims 10 and 11, Lausberg remains as applied above. Lausberg teaches that the molding materials are suitable for thermoforming sheets; however, Lausberg does not teach the process for production of sheets comprising said molding material as described in instant Claim 10. Lausberg further does not teach the use of said sheets as floor or functional coverings.

Pagani provides a succinct summary of known prior art with regard to fabrication of highly compressed covering materials (sheets) made of a plastics material. Pagani describes the process of feeding plastics material into a container, placing a cover on said container, and placing the container and cover between the plates of a press while simultaneously heating (col. 1, lines 31-37). The resulting blocks are then split into thinner plates or layers (sheets) (col. 1, lines 47-49). Such thin plates are suitable as a floor covering, but also as a covering or cover material for other applications or purposes where they are subjected to heavy duty strain or load, for instance the loading area of fork lift trucks (col. 1, lines 53-57). Such covering material is so durable that the

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connection or joining element between the fork lift truck and the plastics covering is sooner damaged than the plastics covering itself (col. 1, lines 57-60).

It would have been obvious to one of ordinary skill in the art to utilize Pagani's process to fabricate thermoformed sheets for use as a floor covering or other covering material comprising Lausberg's molding material for the benefit of increased durability under heavy-duty strain or load.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tseng et al. (US Pat. No. 5,519,094) describe a thermoplastic molding composition and articles comprising thermoplastic polymer components and reinforcing fibers (Abstract, lines 1-3). A desired blend of thermoplastic components is thermoplastic polyurethane and modified polyethylene terephthalate with glass fibers (Abstract, lines 10-12). One example comprises 35% thermoplastic polyurethane, 35% polyethylene terephthalate, and 30% glass (col. 25, lines 41-43).

Filler pigments such as calcium carbonate and silicas, as well as opacifying pigments such as titanium dioxide, may be added (col. 18, lines 52-58).

While Tseng meets many of the structural and compositional requirements of the instant claims, the thermoplastic molding composition is not utilized in a sheet-like covering material. Further, the thermoplastic polymer components are described as being immiscible, casting doubt on the homogeneity of the final product.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT JONES whose telephone number is (571)270-7733. The examiner can normally be reached on Mon-Thurs, 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katarzyna Wyrozebski/
Primary Examiner, Art Unit 1796

R.J.

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